

Appl. No. 10/618,743
Reply to the Office Action of October 27, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12. (Canceled)

Claim 13. (Currently Amended) A compound of the formula:



wherein R¹ is lower alkanoyl, aroyl, aroyl substituted by halo(lower)alkoxy, arylsulfonyl, arylsulfonyl substituted by halogen, lower alkylsulfonyl or cyclo(lower)alkylcarbonyl; R² is lower alkylamino, lower alkenylamino, lower alkynylamino, cyclo(lower)alkylamino, arylamino, or an amino group substituted with a heterocyclic group, each of which is optionally substituted with halogen;

Y is a single bond or lower alkylene; and

Q is -CO- or -SO₂- , and a pharmaceutically acceptable salt thereof.

Claim 14. (Currently Amended) The compound according to Claim 13, wherein

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R² is arylamino which optionally is substituted by halogen, pyridyl[[,] or pyridylamino.

Claim 15. (Previously Presented) The compound according to Claim 13, which is 1-acetyl-4-(4-fluorophenylcarbamoyl)piperazine.

Claim 16. (Currently Amended) A process for preparing a compound of the formula:



wherein R¹ is lower alkanoyl, aroyl, aroyl substituted by halo(lower)alkoxy, arylsulfonyl, arylsulfonyl substituted by halogen, lower alkylsulfonyl or cyclo(lower)alkylcarbonyl;

R² is lower alkylamino, lower alkenylamino, lower alkynylamino, cyclo(lower)alkylamino, arylamino, or an amino group that is substituted by a heterocyclic group, each of which optionally is substituted by a substituent(s);

Y is a single bond or lower alkylene; and

Q is -CO- or -SO₂-, or a pharmaceutically acceptable salt thereof, which comprises:

- 1) reacting a compound of the formula:

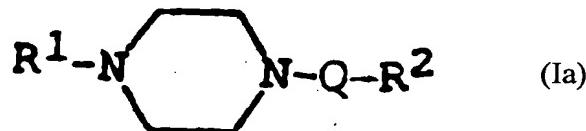
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or its salt with a compound of the formula:

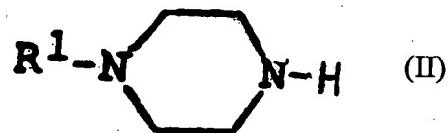


or its reactive derivative at the carboxy or sulfo group, or a salt thereof to provide a compound of the formula:



or its salt, in the above formulas, R¹, R² and Q are each as defined above;

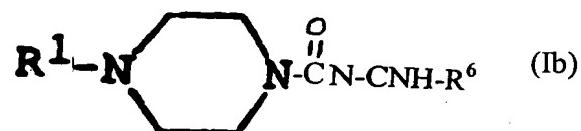
(2) reacting a compound of the formula:



or its salt with a compound of the formula:



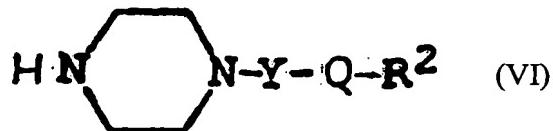
to provide a compound of the formula:



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or its salt, wherein, in the above formulas, R¹ are each as defined above, and R⁶ is aryl which may be substituted with substituent(s) halogen, or pyridyl, or

3) reacting a compound of the formula:



or its salt with a compound of the formula:

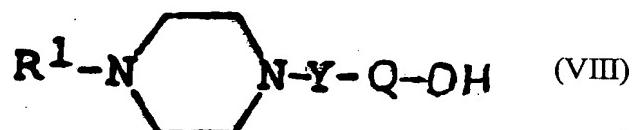


or its reactive derivative at the carboxy or sulfo group, or a salt thereof to provide a compound of the formula:



or its salt, in the above formulas, R¹, R² and Q are each as defined above, or

4) reacting a compound of the formula:



or its reactive derivatives at the carboxy or sulfo group, or a salt thereof with a compound of the formula:



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or its salt to provide a compound of the formula:



or its salt, in the above formulas, R¹, A and Q_a are each as defined above, and R⁷ is lower alkyl, lower alkenyl, lower alkynyl, cyclo(lower)alkyl, aryl, or a heterocyclic group, each of which optionally is substituted with a substituent(s) halogen.

Claim 17. (Previously Presented) A pharmaceutical composition, comprising:
a compound of Claim 13, as an active ingredient, in association with a pharmaceutically acceptable, substantially non-toxic carrier or excipient.

Claim 18. (Previously Presented) A method for the therapeutic treatment of amnesia, dementia or schizophrenia, which comprises:
administering an effective amount of a compound of Claim 13 to mammals.

Claim 19. (Currently Amended) The compound according to Claim 13, wherein R¹ is lower alkanoyl, benzoyl, benzoyl substituted by halo(lower)alkoxy, phenylsulfonyl, phenylsulfonyl substituted by halogen, lower alkylsulfonyl or cyclo(lower)alkylcarbonyl; R² is lower alkylamino, lower alkenylamino, lower alkynylamino, cyclo(lower)alkylamino, or

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phenylamino or an amino group substituted with pyridyl, each of which is optionally substituted with halogen;

Y is a single bond or lower alkylene; and

Q is -CO- or -SO₂-, and a pharmaceutically acceptable salt thereof.

Claim 20. (Currently Amended) The compound according to Claim 19, wherein R² is phenylamino which optionally is substituted by halogen, ~~pyridyl, or pyridylamine~~ and Y is a single bond.